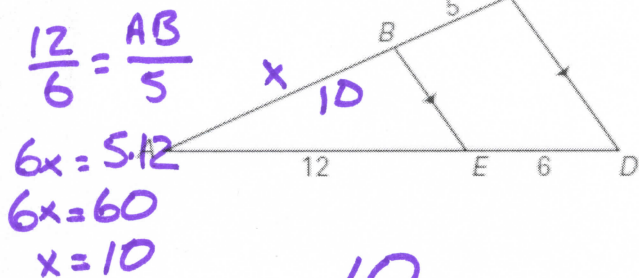


Geometry Unit 6 Worksheet #8 – Parallel Lines and Angle Bisectors

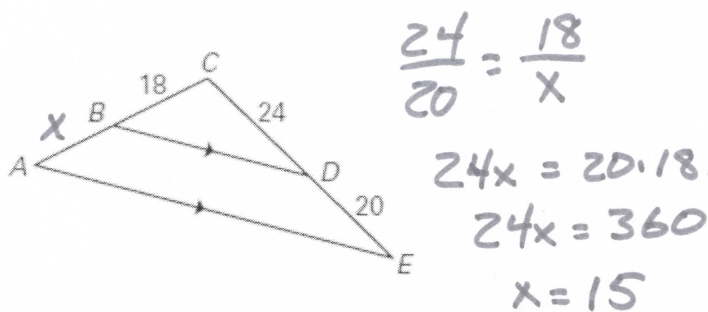
For #1& 2, find the length of \overline{AB}

1.



$\overline{AB} = \underline{10}$

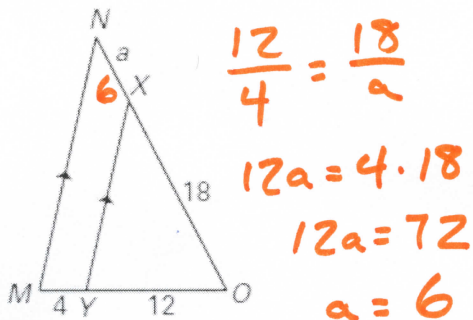
2.



$\overline{AB} = \underline{15}$

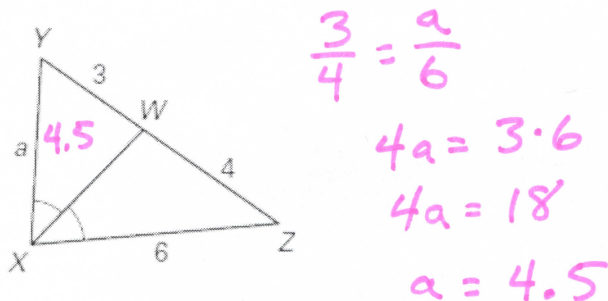
For #3 -12, use proportions to solve for the missing variables.

3.



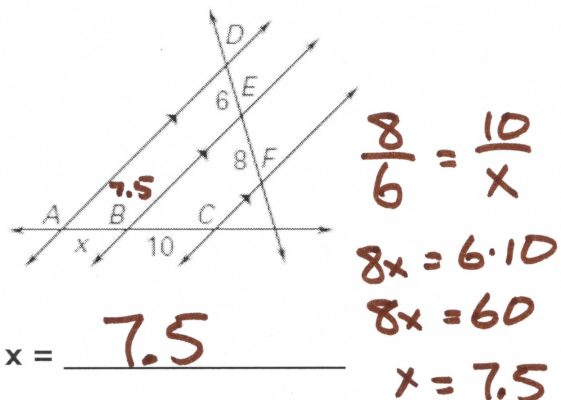
$a = \underline{6}$

4.



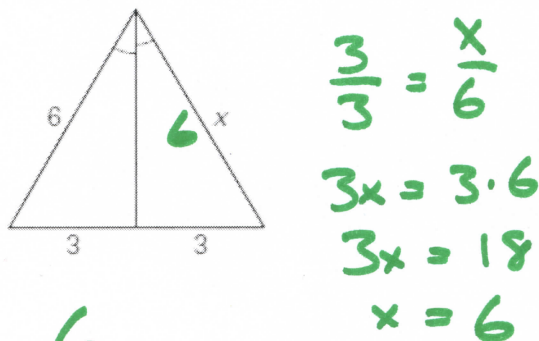
$a = \underline{4.5}$

5.



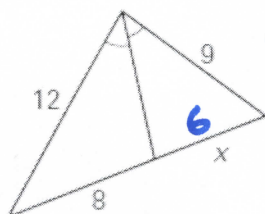
$x = \underline{7.5}$

6.



$x = \underline{6}$

7.



$$\frac{12}{9} = \frac{8}{x}$$

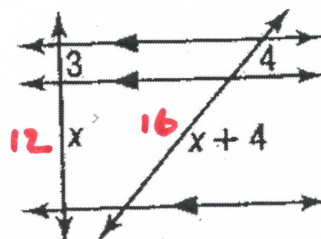
$$12x = 9 \cdot 8$$

$$12x = 72$$

$$x = 6$$

$$x = \underline{6}$$

8.



$$\frac{x}{3} = \frac{(x+4)}{4}$$

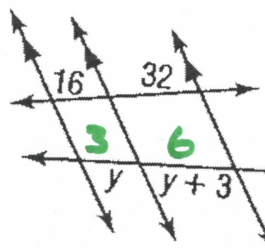
$$3(x+4) = 4x$$

$$3x + 12 = 4x$$

$$12 = x$$

$$x = \underline{12}$$

9.



$$\frac{16}{32} = \frac{y}{(y+3)}$$

$$16(y+3) = 32y$$

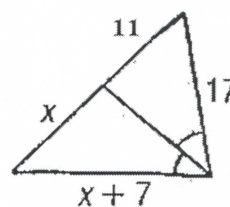
$$16y + 48 = 32y$$

$$48 = 16y$$

$$3 = y$$

$$y = \underline{3}$$

10.



$$\frac{11}{x} = \frac{17}{(x+7)}$$

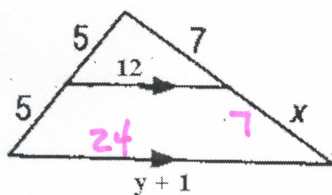
$$17x = 11(x+7)$$

$$17x = 11x + 77$$

$$6x = 77$$

$$x = \frac{77}{6} \text{ or } 12.8\bar{3} \quad x = \frac{77}{6}$$

11.



$$\frac{5}{5} = \frac{7}{x}$$

$$x = 7$$

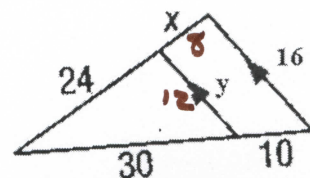
$$y+1 = 2 \cdot 12$$

$$y+1 = 24$$

$$y = 23$$

$$x = \underline{7} \quad y = \underline{23}$$

12.



$$x = 12.8\bar{3}$$

$$\frac{30}{10} = \frac{24}{x}$$

$$30x = 10 \cdot 24$$

$$30x = 240$$

$$x = 8$$

$$x = \underline{8} \quad y = \underline{12}$$

13. Find the missing side lengths

$$\frac{GF}{x} = \underline{9} \quad \frac{4}{6} = \frac{6}{x} \quad 4x = 6 \cdot 6$$

$$4x = 36$$

$$x = 9$$

$$\frac{FC}{y} = \underline{12.5} \quad \frac{4}{10} = \frac{5}{y} \quad 4y = 5 \cdot 10$$

$$4y = 50$$

$$y = 12.5$$

$$\frac{FE}{w} = \underline{6} \quad \frac{4}{4} = \frac{6}{w} \quad w = 6$$

$$\frac{DE}{z} = \underline{17.5} \quad \frac{4}{14} = \frac{5}{z} \quad 4z = 5 \cdot 14$$

$$4z = 70$$

$$z = 17.5$$

